

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-12 (canceled).

Claim 13 (currently amended): A polymer mixture consisting of:

at least one synthetic first polymer P(i) and between 3% to 14% by weight of at least one second polymer P(j),

wherein the first polymer P(i) has a degree of polymerisation  $DP(P(i)) > 500$  and at least one type of crystallisable sequences A having a degree of polymerisation  $DPs(P(i))$  of these sequences  $> 20$ ,

wherein the second polymer P(j) is made up of the same monomer units as the sequences A of P(i) and the degree of polymerisation  $DP(P(j))$  of P(j) is  $20 < DP(P(j)) < 500$ ,

wherein the polymer mixture comprises a molecularly dispersed mixture containing P(i) and P(j) that forms a network ~~under~~ by heterocrystallisation,

wherein P(i), or the sequences A of P(i), comprises a ~~polyolefin selected from the group consisting of a polypropylene, polyethylene, VLDPE, LDPE, LLDPE, HDPE, HMWPE, UHMWPE and mixtures thereof,~~

wherein P(j) has a polydispersity  $< 30$  and is ~~selected from the group consisting of n-alkanes  $C_nH_{2n+2}$ ; isoalkanes, cyclic alkanes  $C_nH_{2n}$ ; a polyethylene wax; paraffins and paraffin wax of mineral origin such as macrocrystalline, intermediate or microcrystalline paraffins; brittle, ductile, elastic or plastic microcrystalline paraffins; paraffins and paraffin wax of synthetic origin; hyper-branched alpha-olefins; polypropylene wax and mixtures thereof; and~~

wherein P(i) has a degree of branching  $< 3 \times 10^{-2}$ , and P(j) has a degree of branching  $< 5 \times 10^{-2}$ , and wherein the first polymer P(i) and the second polymer P(j) have been mixed together using a twin screw extruder, and wherein the polymer mixture of the first polymer P(i) and the second polymer P(j) has an elongation at break greater than an elongation at break of the first polymer P(i) alone.

Claim 14 (currently amended): The polymer mixture according to claim 13, wherein under comparable processing conditions of P(i) and of P(i) + P(j) the quotient of the yield stress  $sy(i, j)$  of P(i) + P(j) and the yield stress  $sy(i)$  of P(i),  $sy(i, j)/sy(i)$  is  $>1.1$  and  $<3.0$ .

Claim 15 (previously presented): The polymer mixtures according to claim 14, wherein  $E(i, j)$  is  $>1.3$ ,  $sy(i, j)$  is  $>1.2$  and  $eb(i, j)$  is  $>1.03$ .

Claim 16 (previously presented): The polymer mixtures according to claim 14, wherein  $E(i, j)$  is  $>1.5$ ,  $sy(i, j)$  is  $>1.3$  and  $eb(i, j)$  is  $>1.05$ .

Claim 17 (previously presented): The polymer mixtures according to claim 14, wherein  $E(i, j)$  is  $>2.0$ ,  $sy(i, j)$  is  $>1.5$  and  $eb(i, j)$  is  $>1.10$ .

Claim 18 (previously presented): The polymer mixture according to claim 13, wherein a quotient of the MFI(i, j) of the mixture of P(i) + P(j) and the MFI(i) of P(i),  $MFI(i, j)/MFI(i)$  is  $>1.2$  and  $<500$ .

Claim 19 (previously presented): The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>1.5$ .

Claim 20 (previously presented): The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>2.0$ .

Claim 21 (previously presented): The polymer mixture according to claim 18, wherein the quotient of MFI(i, j) and MFI(i) is  $>3.0$ .

Claim 22 (previously presented): The polymer mixture according to claim 13, wherein under comparable processing conditions of P(i) and of P(i) + P(j), the quotient of the crystallinity  $K(i, j)$  of P(i) + P(j) and the crystallinity  $K(i)$  of P(i),  $K(i, j)/K(i)$  is  $>1.03$  and  $<3$ .

Claim 23 (previously presented): The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.05$ .

Claim 24 (previously presented): The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.1$ .

Claim 25 (previously presented): The polymer mixture according to claim 22, wherein the quotient of  $K(i, j)$  and  $K(i)$  is  $>1.2$ .

Claims 26-30 (canceled).

Claim 31 (previously presented): The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<1 \times 10^{-2}$ , and  $P(j)$  has a degree of branching  $<1 \times 10^{-3}$ .

Claim 32 (previously presented): The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<5 \times 10^{-3}$ , and  $P(j)$  has a degree of branching  $<1 \times 10^{-3}$ .

Claim 33 (previously presented): The polymer mixture according to claim 13, wherein  $P(i)$  has a degree of branching  $<1 \times 10^{-3}$ , and  $P(j)$  has a degree of branching  $<1 \times 10^{-4}$ .

Claim 34 (canceled).

Claim 35 (previously presented): The polymer mixture according to claim 13, wherein  $P(j)$  has a polydispersity  $<20$ .

Claim 36 (previously presented): The polymer mixture according to claim 13, wherein  $P(j)$  has a polydispersity  $<10$ .

Claim 37 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a polydispersivity  $<5$ .

Claim 38 (previously presented): The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>20$ .

Claim 39 (previously presented): The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>30$ .

Claim 40 (previously presented): The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>40$ .

Claim 41 (previously presented): The polymer mixture according to claim 13, wherein P(i) and/or P(j) have long-chain branchings which have a degree of polymerisation  $>50$ .

Claims 42-43 (canceled).

Claim 44 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a density in  $\text{g/cm}^3$  of  $>0.9$ , and a melting or dropping point in  $^{\circ}\text{C}$  of  $>80$ .

Claim 45 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a density in  $\text{g/cm}^3$  of  $>0.925$ , and a melting or dropping point in  $^{\circ}\text{C}$  of  $>100$ .

Claim 46 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a density in  $\text{g/cm}^3$  of  $>0.950$ , and a melting or dropping point in  $^{\circ}\text{C}$  of  $>110$ .

Claim 47 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a density in  $\text{g/cm}^3$  of  $>0.970$ , and a melting or dropping point in  $^{\circ}\text{C}$  of  $>120$ .

Claim 48 (previously presented): The polymer mixture according to claim 13, wherein P(j) has a density in  $\text{g/cm}^3$  of  $>0.980$ , and a melting or dropping point in  $^{\circ}\text{C}$  of  $>125$ .

Claim 49 (currently amended): The polymer mixture according to claim 13, wherein the polymer mixture after preparation is present in the form selected from the group consisting of granules, pellets, powder, macro- or micro-fibres, films, ~~casting, continuous~~ continuous casting, casting, extrudate, thermo-shaped part and combinations thereof.

Claim 50 (canceled).

Claim 51 (currently amended): The polymer mixture according to claim 14, wherein, if there is a fraction A(j) of P(j) relative to P(i) + P(j) in wt.% within the range  $1 < A(j) < 15$ , the quotient of the breaking elongation at break eb(i, j) of P(i) + P(j) and the breaking elongation at break eb(i) of P(i),  $\text{eb(i, j)/eb(i)}$  is  $>1.01$  and  $<1.5$ .

Claim 52 (previously presented): The polymer mixture according to claim 13, wherein  $0.5 \times \text{DP(P(j))} < \text{DPs(P(i))} < 5 \times \text{DP(P(j))}$ .

Claim 53 (canceled).

Claim 54 (previously presented): The polymer mixture according to claim 13, wherein  $0.3 \times \text{DP(P(j))} < \text{DPs(P(i))} < 7 \times \text{DP(P(j))}$ .

Claim 55 (new): A polymer mixture consisting of:  
at least one synthetic first polymer P(i) and between 3% to 14% by weight of at least one second polymer P(j),  
wherein the first polymer P(i) has a degree of polymerisation  $DP(P(i)) > 500$  and at least one type of crystallisable sequences A having a degree of polymerisation  $DPs(P(i))$  of these sequences  $> 20$ ,  
wherein the second polymer P(j) is made up of the same monomer units as the sequences A of P(i) and the degree of polymerisation  $DP(P(j))$  of P(j) is  $20 < DP(P(j)) < 500$ ,  
wherein the polymer mixture comprises a molecularly dispersed mixture containing P(i) and P(j) that forms a network by heterocrystallisation,  
wherein P(i), or the sequences A of P(i), comprises a polypropylene,  
wherein P(j) has a polydispersivity  $< 30$  and is a polypropylene wax; and  
wherein P(i) has a degree of branching  $< 3 \times 10^{-2}$ , and P(j) has a degree of branching  $< 5 \times 10^{-2}$ , wherein the first polymer P(i) and the second polymer P(j) have been mixed together using a twin screw extruder, and wherein the polymer mixture of the first polymer P(i) and the second polymer P(j) has an elongation at break greater than an elongation at break of the first polymer P(i) alone.